

## CLAIMS:

1. A patient support comprising  
a frame,  
a deck supported by the frame, the deck including a head section  
5 configured to move relative to the frame and a foot section having an adjustable length,  
a controller configured to change the length of the foot section to  
correspond to the position of the head section of the deck, the foot section of the deck  
remaining substantially horizontal during the change of the length of the foot section,  
10 and  
a mattress supported by the deck.
2. The patient support of claim 1, wherein the head section of the  
deck is configured to move between raised and lowered positions and the controller is  
configured to correspond the length of the foot section with the position of the head  
15 section of the deck.
3. The patient support of claim 2, wherein controller is configured  
to increase the length of the foot section of the deck during raising of the head section  
of the deck.
4. The patient support of claim 2, wherein the controller is  
20 configured to decrease the length of the foot section of the deck during lowering of  
the head section of the deck.
5. The patient support of claim 2, wherein the controller is  
configured to simultaneously correspond the length of the foot section of the deck  
with the position of the head section of the deck.
- 25 6. The patient support of claim 1, wherein the controller includes  
a sensor positioned to detect movement of the head section of the deck, the sensor  
sends a signal that activates adjustment of the length of the foot section upon  
detection of the movement of the head section.
7. The patient support of claim 1, wherein the controller is  
30 configured to automatically extend the foot section upon raising of the head section.
8. The patient support of claim 7, wherein the controller is  
configured to automatically retract the foot section upon lowering of the head section.

9. The patient support of claim 1, wherein the mattress includes a head portion positioned over the head section of the deck and an adjustable length foot portion positioned over the foot section of the deck.

5 10. The patient support of claim 9, wherein the foot portion of the mattress includes a heel-pressure relief bladder configured to operate at a first pressure to support a patient's heel in a first position relative to the deck and a second lower pressure configured to support the patient's heel in a second position relative to the deck.

11. The patient support of claim 9, wherein the foot portion of the 10 mattress includes a foam portion and a heel-pressure relief portion having a stiffness less than a stiffness of the foam portion.

12. The patient support of claim 11, wherein the foam portion has a length that is adjustable with the length of the foot section of the deck.

15 13. The patient support of claim 11, wherein the foam portion includes a plurality of transversely extending slots.

14. The patient support of claim 1, wherein the head section of the deck is configured to be infinitely adjustable between raised and lowered positions and the controller causes altering of the length of the foot section in response to movement of the head section.

20 15. A patient support comprising  
a frame,  
a deck supported by the frame, the deck including a head section and a foot section, the head section being configured to raise and lower relative to the frame, and

25 a mattress supported by the deck, the mattress having a head portion positioned over the head section of the deck and an adjustable length foot portion positioned over the foot section of the deck, the length of the foot portion of the mattress being configured to increase in length to correspond to raising of the head section of the deck.

30 16. The patient support of claim 15, further comprising a controller configured to increase the length of the foot portion of the mattress when the head section of the deck is raised.

17. The patient support of claim 16, wherein the controller includes a sensor configured to detect the position of the head section relative to the frame.

18. The patient support of claim 15, wherein the length of the foot portion of the mattress decrease with the lowering of the head section.

5 19. The patient support of claim 15, wherein the length of the foot portion of the mattress simultaneously corresponds with the position of the head portion of the mattress.

10 20. The patient support of claim 15, further comprising a sensor positioned to detect movement of the head portion of the mattress, the sensor sends a signal that activates adjustment of the length of the foot portion of the mattress upon detection of the movement of the head section.

21. The patient support of claim 15, wherein the foot portion of the mattress automatically extends upon raising of the head portion of the mattress.

15 22. The patient support of claim 21, wherein the foot portion of the mattress automatically retracts upon lowering of the head portion of the mattress.

20 23. The patient support of claim 15, wherein the foot portion of the mattress includes a heel-pressure relief bladder configured to operate at a first pressure to support a patient's heel in a first position relative to the deck and a second lower pressure configured to support the patient's heel in a second position relative to the deck.

24. The patient support of claim 15, wherein the foot portion of the mattress includes a foam portion and a bladder.

25 25. The patient support of claim 15, wherein the foot portion of the mattress includes a foam portion having a plurality of transversely extending slots.

26. The patient support of claim 25, wherein the foam portion includes raised perimeter blocking movement of a patient's foot off of the foam portion.